

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:
Please add new claim 47 as follows.

Listing of Claims:

Claims 1-38 (Cancelled)

39. (previously presented) A connection construction between a planar antenna and a circuit board installed in a wireless device,

said planar antenna comprising a planar antenna element, and a plurality of elastically deformable pins formed by bending a plurality of thin strips projected from a side end of the planar antenna element in substantially vertical directions with respect to a plane of the planar antenna element at a plurality of portions of the side end of the planar antenna element, and said circuit board having upper and lower surface planes, and a plurality of through holes,

wherein the planar antenna is electrically and/or mechanically connected to the circuit board by detachably inserting the elastically deformable pins into the through holes, and the elastically deformable pins do not extend beyond the lower surface plane of the circuit board.

40. (previously presented) The connection construction according to claim 39, wherein said planar antenna further comprises a power supply strip and a short circuit strip formed by bending two thin strips projected from one side end of the antenna element in a substantially vertical direction with respect to a plane of the planar antenna element, and a power supply spring pin and a short circuit spring pin that are elastically deformable by bending and are formed at tip portions of the power supply strip and the short circuit strip, and

said circuit board further comprises a power supply circuit and a short circuit, and a power supply hole and a short circuit hole each having an inner wall to which a power supply conductive layer and a short circuit conductive layer connected to the power supply circuit and the short circuit are arranged,

wherein the power supply spring pin and the short circuit spring pin of the planar antenna are detachably inserted into the power supply hole and the short circuit hole of the circuit board in a bending deformable manner so as to connect mechanically and electrically the planar antenna and the circuit board.

41. (previously presented) The connection structure according to claim 40, wherein said planar antenna further comprises a plurality of connection spring pins formed by bending a plurality of thin strips projected from a side end of the planar antenna element in a substantially vertical direction with respect to a plane of the planar antenna element at a plurality of portions of the side end of the planar antenna element other than the portions at which the power supply strip and the short circuit strip are formed, and

said circuit board comprises a plurality of connection holes formed at the portions corresponding to the plural connection spring pins where the power supply circuit, the short circuit, the power supply conductive layer and the short circuit conductive layer are not formed,

wherein the plural connection spring pins of the planar antenna are inserted into the plural connection holes of the circuit board in a bending deformable manner so as to connect mechanically the planar antenna and the circuit board.

42. (Withdrawn) The connection structure between the planar antenna and the circuit board according to claim 39, wherein said planar antenna further comprises a power supply strip and a short circuit strip formed by bending two thin strips projected from one side end of the antenna element in a substantially vertical direction with respect to a plane of the planar antenna element, a power supply pressure-connection terminal and a short circuit pressure-connection terminal that are elastically deformable by bending and are formed at tip portions of the power supply strip and the short circuit strip, and a plurality of connection spring pins formed by bending a plurality of thin strips projected from a side end of the planar antenna element in a substantially vertical direction with respect to a plane of the planar antenna element at a plurality of portions of the side end of the planar antenna element other than the portions at which the power supply strip and the short circuit strip are formed, and

said circuit board further comprises a power supply circuit and a short circuit, a power supply conductive pad and a short circuit conductive pad connected to the power supply circuit and the short circuit, and a plurality of connection holes formed at the portions where the power supply circuit, the short circuit, the power supply conductive pad and the short circuit conductive pad are not formed,

wherein the plural connection spring pins of the planar antenna are detachably inserted into the plural connection holes of the circuit board in a bending deformable manner so as to connect mechanically the planar antenna and the circuit board, and, wherein the power supply pressure-connection terminal and the short circuit pressure-connection terminal of the planar antenna are pressed to the power supply conductive pad and the short circuit conductive pad of the circuit board in a bending deformable manner so as to connect electrically the planar antenna and the circuit board.

43. (Withdrawn) The connection structure according to claim 39, further comprising a film made of electrically insulated material laminated on a surface of the planar antenna element opposed to the circuit board and/or a surface of the planar antenna on the other side of the surface opposed to the circuit board.
44. (Withdrawn) The connection structure according to claim 43, wherein the film made of electrically insulated material is laminated on a surface of the planar antenna element opposed at least to the circuit board and a part of a housing or a support member for this purpose is interposed between the planar antenna and the circuit board.
45. (Withdrawn) The connection structure according to claim 43, wherein a thickness of the film is not less than 1 μm and not larger than 200 μm .
46. (previously presented) The connection structure according to claim 39, wherein the planar antenna element is made of brass, phosphorus bronze, nickel copper, titanium copper, Corson alloy or beryllium copper.
47. (new) The connection structure according to claim 39, wherein inner surfaces of the through holes in the circuit board are free from a brazing material.